

I Claim:

1. A prosthesis to replace all or a portion of a natural facet joint on a vertebral body comprising a prosthesis body accommodating fixation to
5 the vertebral body at or near a pedicle and without support by a lamina, the prosthesis body including a fastening element installed within the vertebral body at or near a pedicle, and
an artificial facet joint structure carried by
10 the prosthesis body at a location spaced from the fastening element, the artificial facet joint structure being adapted and configured to replace all or a portion of a natural facet joint.
2. A prosthesis according to claim 1
15 wherein the fastening element is located superior to the artificial facet joint structure.
3. A prosthesis according to claim 1
wherein the artificial facet joint structure is posterior to the pedicle containing the fastening
20 element.
4. A prosthesis according to claim 1
wherein the prosthesis body includes a caudal structure that extends from the fastening element toward a cephalad portion of a natural facet joint, and
25 wherein the artificial facet joint structure is carried on the caudal structure.
5. A prosthesis according to claim 1
wherein the artificial facet joint structure is adapted and configured to articulate with a portion of
30 a facet joint of an adjoining vertebral body.
6. A prosthesis according to claim 1
wherein the artificial facet joint structure is adapted and configured to replace a cephalad portion of a natural facet joint.
- 35 7. A prosthesis according to claim 1

wherein the artificial facet joint structure is adapted and configured to replace a cephalad portion of a natural facet joint and articulate with a caudal portion of a facet joint of an adjoining vertebral body.

5 8. A prosthesis according to claim 1
 wherein the artificial facet joint structure is fixed to the prosthesis body.

 9. A prosthesis according to claim 1
 wherein the artificial facet joint structure
10 is fixed to the prosthesis body by adhesive or cement.

 10. A prosthesis according to claim 1
 wherein the artificial facet joint structure is fixed to the prosthesis body by mechanical attachment.

 11. A prosthesis according to claim 1
15 wherein the artificial facet joint structure is removably carried by the prosthesis body.

 12. A prosthesis according to claim 1
 wherein the artificial facet joint structure is removably attached to the prosthesis body by
20 frictional engagement.

 13. A prosthesis according to claim 1
 wherein the artificial facet joint structure is removably attached to the prosthesis body by a Morse taper.

25 14. A prosthesis according to claim 1
 wherein the artificial facet joint structure comprises an insert fitted to the prosthesis body.

 15. A prosthesis according to claim 1
 wherein the artificial facet joint structure
30 comprises an insert fitted by frictional engagement to the prosthesis body.

 16. A prosthesis according to claim 1
 wherein the artificial facet joint structure comprises an insert fitted by a Morse taper to the
35 prosthesis body.

17. A prosthesis according to claim 1
wherein the artificial facet joint structure
comprises a removable insert fitted to the prosthesis
body.

5 18. A prosthesis according to claim 1
wherein the artificial facet joint structure
pivots with respect to the prosthesis body.

19. A prosthesis according to claim 1
wherein the artificial facet joint structure
10 is made of at least one selected prosthetic material.

20. A prosthesis according to claim 1
wherein the selected prosthetic material
includes polyethylene, rubber, tantalum, titanium, chrome
cobalt, surgical steel, bony in-growth material, ceramic,
15 artificial bone, or a combination thereof.

21. A prosthesis according to claim 1
wherein the prosthesis body is fixed to the
prosthesis body to the vertebral body by an adhesive or
cement.

20 22. A prosthesis according to claim 1
wherein the prosthesis body includes a bony
in-growth material.

23. A prosthesis according to claim 1
wherein the fastening element is fixed to the
25 vertebral body by an adhesive or cement.

24. A prosthesis according to claim 1
wherein the fastening element includes a bony
in-growth material.

25. A method of replacing, on a vertebral
30 body, all or a portion of a natural facet joint using the
prosthesis defined in claim 1 to provide improved support
for the spinal column, the method comprising the steps of

(i) removing all or a portion of a natural
articular process from the vertebral body, and

35 (ii) fixing the prosthesis as defined in claim

1 to the vertebral body to replace the removed portion of the natural articular process with the artificial facet joint structure.

26. A method according to claim 25
5 further including a step of removing at least some of the lamina from the vertebral body.

27. A method according to claim 25
further including a step of removing at least
part of a pedicle from the vertebral body.
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